

## **ABSTRACT**

### **Background & Objectives:**

The most commonly performed regional blocks in paediatric anaesthesia is caudal block. It is used for both intra and post-operative analgesia. The mean duration of analgesia provided by local anaesthetics alone is short.. Caudal opioids has many side effects like

1. Respiratory depression
2. Vomiting
3. Pruritis
4. Urinary retention, etc.

An opioid agonistic drug, Tramadol, is known for its analgesic effects with lesser side effects. This study was conducted to identify the efficiency and safety of addition of the opioid, tramadol to the local anaesthetic agent, bupivacaine in caudal block in paediatric patients as single shot.

### **Methods:**

This study was done among 60 paediatric patients between 1 to 8 years of age, coming for infraumbilical surgeries. These children were randomly divided into 2 groups .Each group containing of 30 members. Children in Group B received caudal block with 0.25% bupivacaine (1ml/kg) and BT group received caudal block with 0.25% bupivacaine (1ml/kg) with

tramadol (1mg/kg). The variables studied were hemodynamic changes, duration of analgesia and incidence of side effects. Pain assessment was done at 1, 2, 3, 4, 8, 12, and 24 hours postoperatively.

### **Results:**

The study groups were similar in age, sex and weight. The hemodynamic analysed were systolic and diastolic blood pressure, heart rate and respiratory rate were also similar between the two groups after administering caudal block. The mean duration of analgesia in group BT ( $463.67 \pm 56.48$  min) was significantly longer ( $p < 0.001$ ) than group B ( $221.0 \pm 7.92$  min).

The pain score in the two groups were similar up to 2 hours after surgery but was higher in group B at the end of 3rd and 4th hour compared with group BT. Sedation score was similar in both the groups. Incidence of vomiting was comparable in both the groups while there were no incidence of bradycardia, hypotension or decrease in respiratory rate in the two groups.

**Conclusion:**

This study showed, by adding tramadol 1mg/kg to 0.25% bupivacaine (1ml/kg) improved the analgesic duration and efficacy after a single shot caudal block with minimal side effects in children.

**Key words:** *Caudal; bupivacaine; tramadol; children.*